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[Continued on next page]

(54) Title: RHESUS HER2/NEU, NUCLEOTIDES ENCODING SAME, AND USES THEREOF

Predicted Amino Acid Sequence of First Rhesus Her2/Neu Protein (SEQ ID NO:2)

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   1 MELAAWYRWG LLLALLPPGA AGTQVCTGTD MKLRLPASPE THLDMLRHLY QGCQVVQGNL
  61 ELTYLPTNAS LSFLQDIQEV QGYVLIAHNQ VRQVPLQRLR IVRGTQLFED NYALAVLDNG
 121 DLLNNTTPVT GASPGGLREL QLRSLTEILK GGVLIQRNPQ LCYQDTILWK DIFHKNNQLA
 181 LTLIDTNRSR ACHPCSPVCK GSRCWGESSE DCQSLTRTVC AGGCARCKGP LPTDCCHEQC
 241 AAGCTGPKHS DCLACLHFNH SGICELHCPA LVTYNTDTFE SMPNPEGRYT FGASCVTACP
 301 YNYLSTDVGS CTLVCPLHNQ EVTAEDGTQR CEKCSKPCAR VCYGLGMEHL REVRAVTSAN
 361 IQEFAGCKKI FGSLAFLPES FDGDPASNTA PLQPEQLRVF ETLEEITGYL YISAWPDSLP
 421 DLSVLQNLQV IRGRILHNGA YSLTLQGLGI SWLGLRSLRE LGSGLALIHH NTRLCFVHTV
 481 PWDQLFRNPH QALLHTANRP EDECVGEGLA CHQLCARGHC WGPGPTQCVN CSQFLRGQEC
 541 VEECRVLQGL PREYVNARHC LPCHPECQPQ NGSVTCFGPE ADQCVACAHY KDPPFCVARC
 601 PSGVKPDLSY MPIWKFPDEE GTCQSCPINC THSCVDLDDK GCPAEQRASP LTSIISAVVG
 661 ILLVVVLGVV FGILIKRRQQ KIRKYTMRRL LQETELVEPL TPSGAMPNQA QMRILKETEL
 721 RKVKVLGSGA FGTVYKGIWI PDGENVKIPV AIKVLRENTS PKANKEILDE AYVMAGVGSP
 781 YVSRLLGICL TSTVQLVTQL MPYGCLLDHV RENRGRLGSQ DLLNWCMQIA KGMSYLEDVR
 841 LVHRDLAARN VLVKSPNHVK ITDFGLARLL DIDETEYHAD GGKVPIKWMA LESILRRRFT
 901 HQSDVWSYGV TVWELMTFGA KPYDGIPARE IPDLLEKGER LPQPPICTID VYMIMVKCWM
 961 IDSECRPRFR ELVSEFSRMA RDPQRFVVIQ NEDLGPASPL DSTFYRSLLE DDDMGDLVDA
1021 EEYLVPQQGF FCPDPAPGTG GMVHHRHRSS STRSGGGDLT LGLEPSEEEA PRSPRAPSEG
1081 TGSDVFDGDL GMGAAKGLQS LPAHDPSPLQ RYSEDPTVPL PSETDGYVAP LTCSPQPEYV
1141 NQPDVRPQPP SPQEGPLSPA RPTGATLERP KTLSPGKNGV VKDVFAFGGA VENPEYLAPR
1201 GGAAPQPHLP PAFSPAFDNL YYWDQDPSER GAPPSTFKGT PTAENPEYLG LDVPV*
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(57) Abstract: Polynucleotides encoding rhesus monkey HER2/neu have been isolated, cloned and sequenced. The gene encoding the HER2/neu is commonly associated with the development of epithelial-derived human carcinomas. The present invention provides compositions and methods to elicit or enhance immunity to the protein product expressed by the HER2/neu tumor-associated antigen, wherein aberrant HER2/neu expression is associated with a carcinoma or its development. This invention specifically provides adenoviral vector constructs carrying rhHER2/neu and discloses their use in vaccines and pharmaceutical compositions for preventing and treating cancer.

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